The Sampler

December 22, 2016

The Sampler is a monthly e-newsletter produced by the Volunteer Lake Assessment Program.

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Web Highlights

This month's featured lake website is Long Pond Protective Association, Danville/Kingston, NH

EPA's National Lakes Assessment Finds Nutrient Pollution Widespread in Lakes

Many Lakes Getting Murkier, But Study Gives Hope for Improvement

Lake Ecologists See Winter as Key Scientific Frontier

Extreme Downpours Could Increase Fivefold Across the US

Public Willing to Pay to Reduce Toxic Algae

Fossilized Water Fleas: Evolution of The Micro-Crustacean Group Cladocera

Upcoming Events

Mobile Mapping Made Easy
Wednesday January 9, 2017
1:00 - 4:00 p.m.
UNH
Durham, NH 03824

Winterfest 2017
Saturday, February 18, 2017

Twelve Days of Lakes-mas

On the first day of Lakes-mas,
My true love sent to me,
A Wood Duck in a maple tree

On the second day of Lakes-mas,
My true love sent to me,
Two Common Loons, and a
Wood Duck in a maple tree

On the third day of Lakes-mas,
My true love sent to me,
Three Brook Trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the fourth day of Lakes-mas,
My true love sent to me,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the fifth day of Lakes-mas,
My true love sent to me,
Five Dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the sixth day of Lakes-mas,
My true love sent to me,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood duck in a maple tree

On the seventh day of Lakes-mas,
My true love sent to me,
Seven frogs a peeping
Six geese a laying
Five dragonflies
Four lily pads
Three brook trout
Two Common Loons, and a
Wood Duck in a maple tree

On the eighth day of Lakes-mas,

12:00 - 3:00 p.m.
Squam Lakes Association
534 Route 3
Holderness, NH 03245

2017 NH Water and Watershed Conference
March 24, 2017
Plymouth State University
Plymouth, NH 03264

Save the Date!
NEAEB 2017
March 14-16, 2017
Hilton Hartford Hotel
Hartford, CT 06103

2017 Lakes Congress
June 1-2, 2017
Church Landing at Mills Falls
Meredith, NH 03253

Grants

NH Charitable Foundation
Multiple Grant Programs

New England Grassroots Environment Fund
Seed and Grow Grants

2017 Healthy Watersheds Consortium Grants
Request for Proposals
February 1, 2017

Limno Lingo

Polymictic Lakes: These lakes are ice-covered part of the year and after ice-out, during the warm season, there is continuous circulation (mixing) of water throughout the water column. These lakes are shallow in depth, typically less than 15 ft., and water temperature is generally uniform from the surface to the bottom, meaning they do not thermally stratify into distinct layers during the summer months. Due to the continuous circulation, the lakes are well oxygenated and typically support a wide variety of warm water fish. Many of our shallower lakes and ponds in New Hampshire are polymictic.

My true love sent to me,
Eight fish a jumping,
Seven frogs a peeping,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the ninth day of Lakes-mas,
My true love sent to me,
Nine beavers building,
Eight fish a jumping,
Seven frogs a peeping,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the tenth day of Lakes-mas,
My true love sent to me,
Ten snappers snapping,
Nine beavers building,
Eight fish a jumping,
Seven frogs a peeping,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

On the eleventh day of Lakes-mas,
My true love sent to me,
Eleven crayfish crawling,
Ten snappers snapping,
Nine beavers building,
Eight fish a jumping,
Seven frogs a peeping,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout
Two Common Loons, and a
Wood Duck in a maple tree

On the twelfth day of Lakes-mas,
My true love sent to me,
Twelve herons wading,
Eleven crayfish crawling,
Ten snappers snapping,
Nine beavers building,
Eight fish a jumping,
Seven frogs a peeping,
Six geese a laying,
Five dragonflies,
Four lily pads,
Three brook trout,
Two Common Loons, and a
Wood Duck in a maple tree

EPA Proposes Recreational Water Quality Criteria for Cyanotoxins

The Environmental Protection Agency (EPA) announced draft recreational water quality criteria for the cyanotoxins microcystin and cylindrospermopsin to protect the public while participating in recreational activities in and on the water. Once finalized, the water quality criteria can be adopted into state water quality standards to meet Clean Water Act purposes and may be used to issue public beach advisories.

Photo courtesy of Fred Riley, Sandown, NH

Cyanotoxins are a class of toxins produced by cyanobacteria, formerly called blue-green algae. Cyanobacteria are naturally occurring in freshwater systems. Increases in nutrient levels in freshwaters (phosphorus/nitrogen), combined with warmer water temperatures, abundant sunlight, and calm conditions can trigger the growth of cyanobacteria and lead to bloom conditions. These blooms have the potential to be harmful to those recreating in or ingesting water due to cyanobacteria's ability to produce cyanotoxins, such as microcystin. Cyanotoxins in high concentrations can cause adverse health affects by targeting the liver, kidneys, and central nervous system. The development of recreational water quality criteria for cyanotoxins to protect public health follows EPA's issuance of health advisories for cyanotoxins in drinking water in 2015. For more information on cyanobacteria and recreational exposure, visit the CyanoHABs website.

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